99-5

U S WEST, Inc.
Suite 700
1020 Nineteenth Street, NW
Washington, DC 20036
202 429-3136
FAX 202 296-5157

Kenneth T. Cartmell
Executive Director - Federal Regulatory

USWEST

February 16, 1999

Mr. Dale Hatfield
Chief, Office of Engineering and Technology
Federal Communications Commission
2000 M Street, NW, Room 480
Washington, DC 20554

RE: CC Docket No. 91-273
Final Service Disruption Report, Roswell, NM
RSWLNMMADS0

Dear Mr. Hatfield:

On January 15, 1999, U S WEST Communications ("USWC") experienced a service outage in Roswell, NM. In accordance with the reporting rules, enclosed is USWC's Final Disruption Report for this outage.

Please contact me if you have questions concerning this report.

Sincerely,

Kenneth T. Cartmell

Attachment

cc: Mr. Richard Smith
Mr. Robert Kimball

Final Service Disruption Report

Reporting Company: U S WEST ("US WEST")

Location of Disruption: Roswell, NM (RSWLNMMADS0)

---

1. **Date and Time of Incident**:
January 15, 1999 at 0957 MST

2. Geographic Area Affected:
Roswell, New Mexico area

3. Estimated Number of Customers Affected:
34,330 customers were affected by the outage.

4A. Types of Services Affected:
Interoffice, InterLATA Intraoffice, 911 and two FAA circuits were affected.

4B. 911 Service Affected:
911 was impacted for Roswell Main, Roswell South and Artesia, New Mexico, affecting ten PSAPs. Artesia Fire and Police Departments, the Roswell Police Department and the New Mexico State Patrol lines were re-routed at 13:00 MST.

5. Duration of Outage:
Service was restored at 2225 MST. Total duration of the outage was 12 hours, 28 minutes.

6. Estimated Number of Blocked Calls:
There were 138,677 blocked calls.

7A. Root Cause of the Incident:
The root cause of the incident was damage to facilities caused by construction.

On January 15, 1999, a contractor was placing Rip Wrap® and chain link along an embankment, as part of a highway-widening project. Rip Wrap® is used for erosion control. The material is secured with 4-ft. angle iron, which severed a 12-strand fiber cable during placement of the material.

At 0957 MST, trouble notification was received in the Network Reliability Operations Center (NROC). The site of the cut was initially believed to be in the area of Clovis, NM; however, no construction activity was identified in the Clovis area.

At 1104 MST, the site of the disruption was identified as an area approximately 25 miles north of Roswell. An OTDR (Optical Time Domain Reflectometer) was then used to more specifically locate the site of the problem.

By 1315 MST, reroute capability for Roswell 911 had been identified and initiated. At 1330 MST, the FAA T1s for Holliman Air Force Base were rerouted to radio allowing the air force base to resume flight operations.

The site of the disruption required an extreme angle of excavation. By 1800 MST, U S WEST and GTE technicians had located the cut and begun restoration. Approximately 500 feet of restoration fiber was placed along the highway right-of-way. Partial restoration of the 12-strand fiber was achieved by 1930 MST and full restoration accomplished by 2225 MST.

7B. Name and Type of Equipment:
One 12-Strand Fiber Optic Cable

7C. Specific Part of Network Affected:
Interoffice transport.

8. Method(s) Used to Restore Service:
Restoration was achieved using Fiberloc connectors.

9. Steps Taken to Prevent Recurrence of Outage:
New Mexico has "One Call" legislation, which requires contractors to request, locates before any excavation activity. The construction company was aware of the law but assumed that the contractor responsible for the locate had taken care of all pertinent activities. The run had been located in April, 1998, however a more recent locate request had not been ordered.

The following steps have been or will be taken to prevent recurrence of the outage:

- U S WEST's Cable Damage Prevention group is addressing the locate issues with all contractors involved in this incident.
- The contractor will be billed for all damages.
- New fiber route markers will be placed at this location.

10A. Applicable Best Practice(s):
U S WEST reviewed *Network Reliability: A Report to the Nation*, June 1993 and evaluated all recommendations and best practices by focus area. Based on the root cause analysis, the most appropriate focus areas are:

Section A - Fiber Optics Cable Dig-Ups
Reference 6.1.1 – Best Practices To Prevent Fiber Cable Damage Caused By Digging

Section B - Signaling Network Systems
Reference 6.1.1 - Root Cause Analysis

E-911 Systems
Section F- 6.1.1 Diverse Routing of Interoffice Facilities
6.4 Network Management Center

10B. Best Practice(s) Used:
Section A - Fiber Optics Cable Dig-Ups
Reference 6.1.1 – Best Practices To Prevent Fiber Cable Damage Caused By Digging

Section B - Signaling Network Systems
Reference 6.1.1 - Root Cause Analysis

Section F - E-911 Systems
6.1.1 Diverse Routing of Interoffice Facilities
6.4 Network Management Center

10C. Analysis of Effectiveness of Best Practice(s):

Section A - Fiber Optics Cable Dig-Ups
Reference 6.1.1 – Best Practices To Prevent Fiber Cable Damage Caused By Digging

The contractor requested a cable locate in April, but allowed 10 months to lapse before the actual work commenced. A more current locate was not requested. The excavation contractor believed that the construction contractor had requested appropriate locates and was advised that no conflict existed for digging. Because of the failure on behalf of the contractor to request a timely locate, Mark and Standby was not performed.

Section B – Signaling Network Systems
Reference 6.1.1 -- Root Cause Analysis

This recommendation is specific to Signaling Networks, but US WEST requires a root cause analysis on any significant network failure.

Section F - E-911 Systems
Reference 6.1.1 Diverse Routing of interoffice Facilities – This recommendation describes the optimum configuration of two diverse routes for E-911.

Reference 6.4 Network Management Center. This recommendation describes the use of centralized network management centers to monitor the 911 network as a unique and separate entity from the rest of the network. U S WEST does not have a NMC dedicated to 911, but network traffic for 911 trunk groups is monitored in the two regional Network Management Centers. U S WEST also has two Designed Services Centers with responsibility for monitoring 911and two Regional NROCs with responsibility for monitoring the health of the network through alarm indications.

Contact Person:
Ken Cartmell, Executive Director - Federal Regulatory
U S WEST
1020 19th Street, NW, Suite 700
Washington, D.C. 20036
Telephone (202) 429-3136